

FIG. 1 (PRIOR ART)

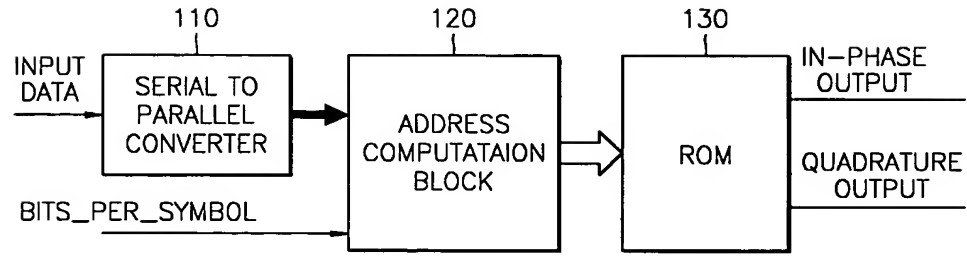


FIG. 2 (PRIOR ART)

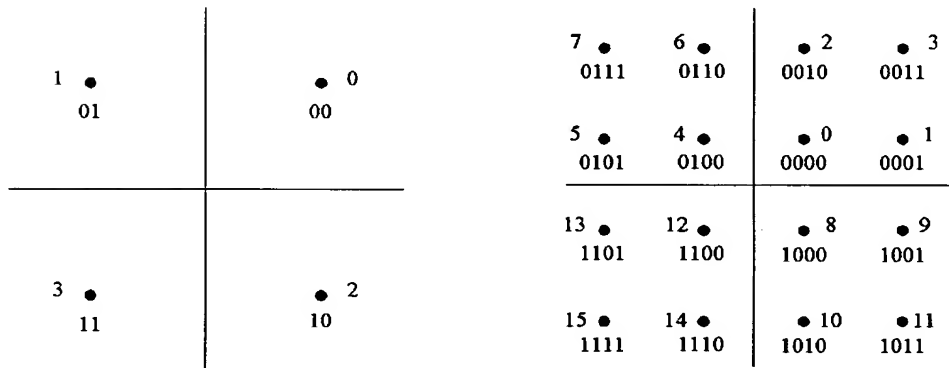


FIG. 3 (PRIOR ART)

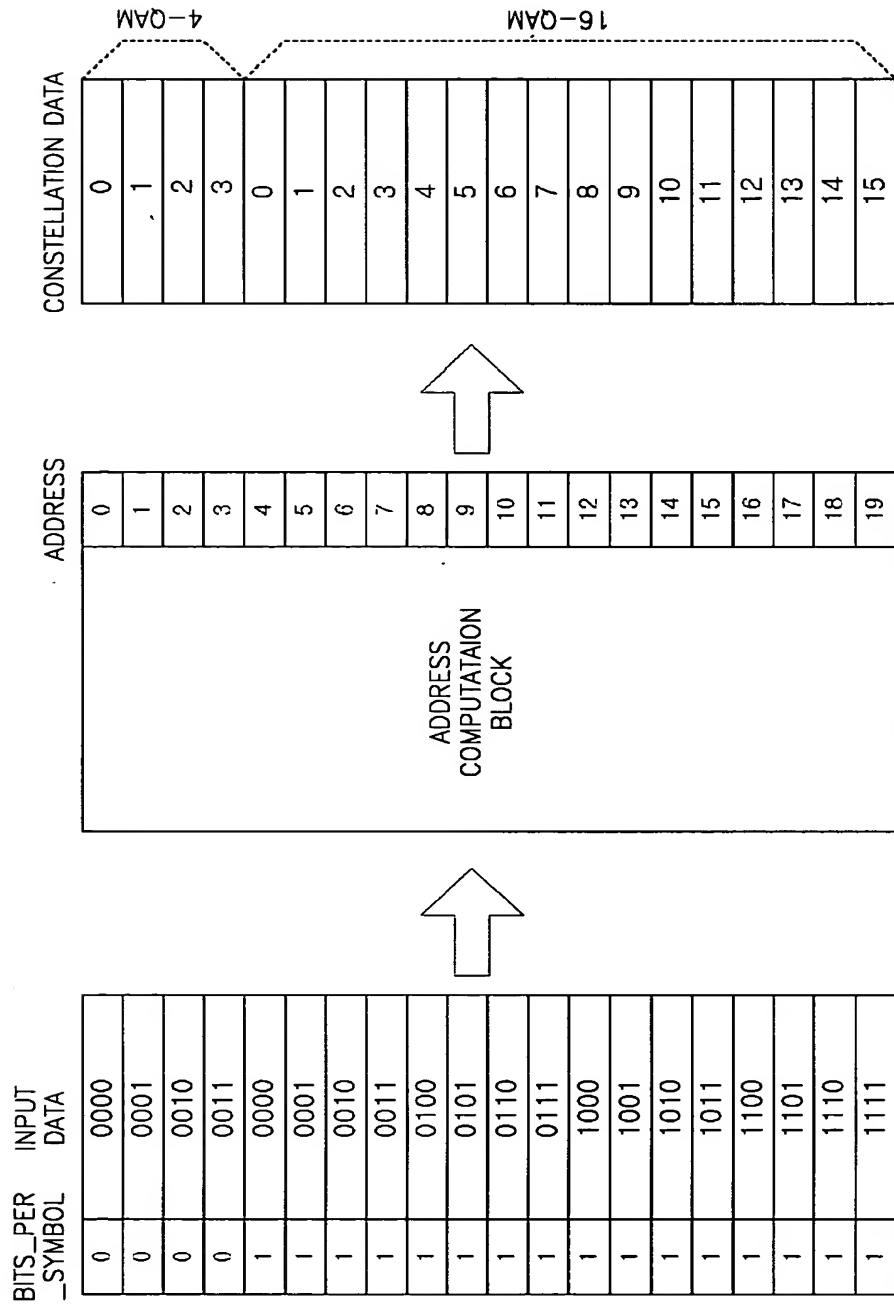


FIG. 4A

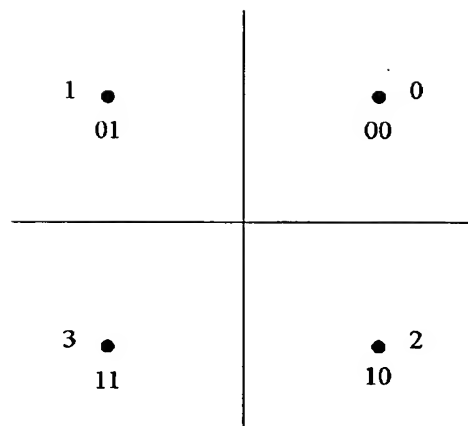


FIG. 4B

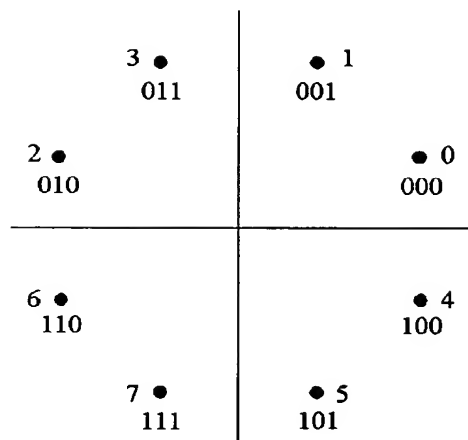


FIG. 4C

7 ● 0111	6 ● 0110	● 2 0010	● 3 0011
5 ● 0101	4 ● 0100	● 0 0000	● 1 0001
13 ● 1101	12 ● 1100	● 8 1000	● 9 1001
15 ● 1111	14 ● 1110	● 10 1010	● 11 1011

FIG. 4B

10 ● 01010	14 ● 01110	● 6 00110	● 2 00010		
16 ● 01111	13 ● 01101	12 ● 01100	● 4 00100	● 5 00101	● 7 00111
11 ● 01011	9 ● 01001	8 ● 01000	● 0 00000	● 1 00001	● 3 00011
27 ● 11011	25 ● 11001	24 ● 11000	● 16 10000	● 17 10001	● 19 10011
31 ● 11111	29 ● 11101	28 ● 11100	● 20 10100	● 21 10101	● 23 10111
26 ● 11010	30 ● 11110	● 22 10110	● 18 10010		

FIG. 4E

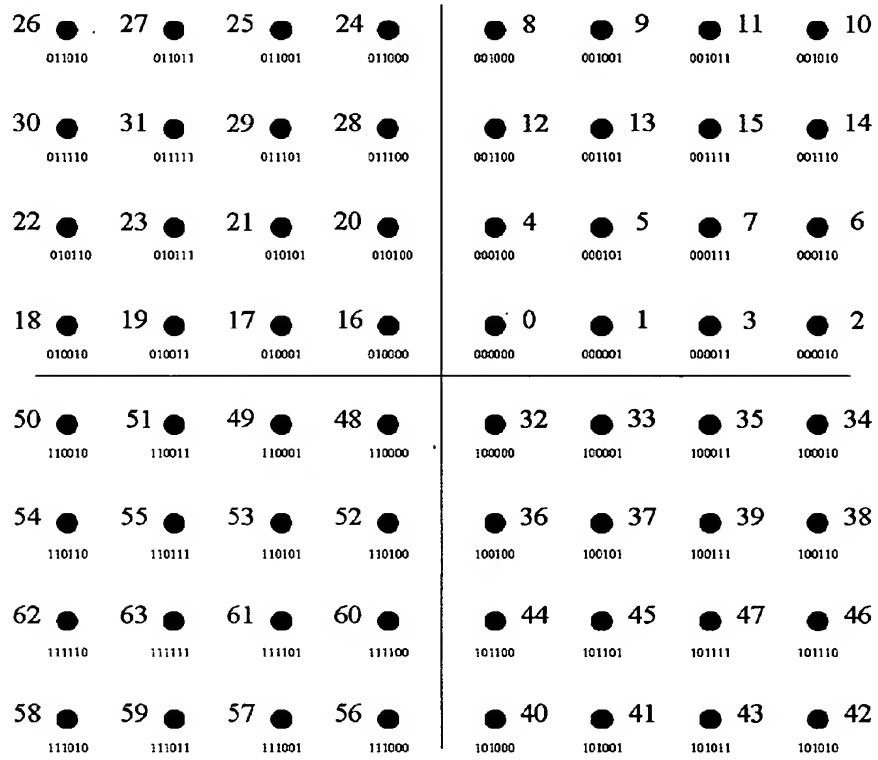


FIG. 4F

44 ●	45 ●	61 ●	60 ●	28 ●	29 ●	13 ●	12 ●				
0101100	0101101	0111101	0111100	0011100	0011101	0001101	0001100				
36 ●	37 ●	53 ●	52 ●	20 ●	21 ●	5 ●	4 ●				
0100100	0100101	0110101	0110100	0010100	0010101	0000101	0000100				
55 ●	54 ●	50 ●	51 ●	49 ●	48 ●	16 ●	17 ●	19 ●	18 ●	22 ●	23 ●
0110111	0110110	0110010	0110011	0110001	0110000	0010000	0010001	0010011	0010010	0010110	0010111
63 ●	62 ●	58 ●	59 ●	57 ●	56 ●	24 ●	25 ●	27 ●	26 ●	30 ●	31 ●
0111111	0111110	0111010	0111011	0111001	0111000	0011000	0011001	0011011	0011010	0011110	0011111
47 ●	46 ●	42 ●	43 ●	41 ●	40 ●	8 ●	9 ●	11 ●	10 ●	14 ●	15 ●
0101111	0101110	0101010	0101011	0101001	0101000	0001000	0001001	0001011	0001010	0001110	0001111
39 ●	38 ●	34 ●	35 ●	33 ●	32 ●	0 ●	1 ●	3 ●	2 ●	6 ●	7 ●
0100111	0100110	0100010	0100011	0100001	0100000	0000000	0000001	0000011	0000010	0000110	0000111
103 ●	102 ●	98 ●	99 ●	97 ●	96 ●	64 ●	65 ●	67 ●	66 ●	70 ●	71 ●
1100111	1100110	1100010	1100011	1100001	1100000	1000000	1000001	1000011	1000010	1000110	1000111
111 ●	110 ●	106 ●	107 ●	105 ●	104 ●	72 ●	73 ●	75 ●	74 ●	78 ●	79 ●
1101111	1101110	1101010	1101011	1101001	1101000	1001000	1001001	1001011	1001010	1001110	1001111
127 ●	126 ●	122 ●	123 ●	121 ●	120 ●	88 ●	89 ●	91 ●	90 ●	94 ●	95 ●
1111111	1111110	1111010	1111011	1111001	1111000	1011000	1011001	1011011	1011010	1011110	1011111
119 ●	118 ●	114 ●	115 ●	113 ●	112 ●	80 ●	81 ●	83 ●	82 ●	86 ●	87 ●
1110111	1110110	1110010	1110011	1110001	1110000	1010000	1010001	1010011	1010010	1010110	1010111
100 ●	101 ●	117 ●	116 ●	84 ●	85 ●	69 ●	68 ●				
1100100	1100101	1110101	1110100	1010100	1010101	1000101	1000100				
108 ●	109 ●	125 ●	124 ●	92 ●	93 ●	77 ●	76 ●				
1101100	1101101	1111101	1111100	1011100	1011101	1001101	1001100				

FIG. 4G



FIG. 5

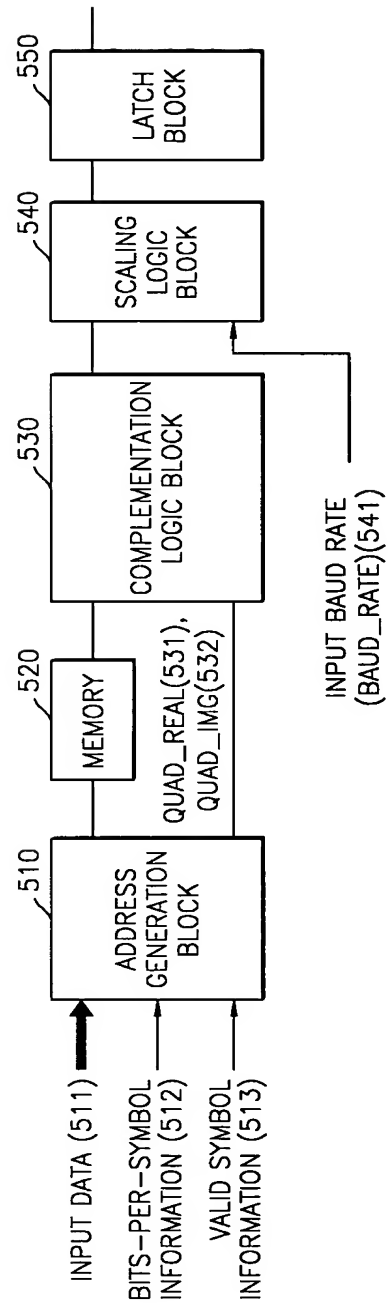


FIG. 6

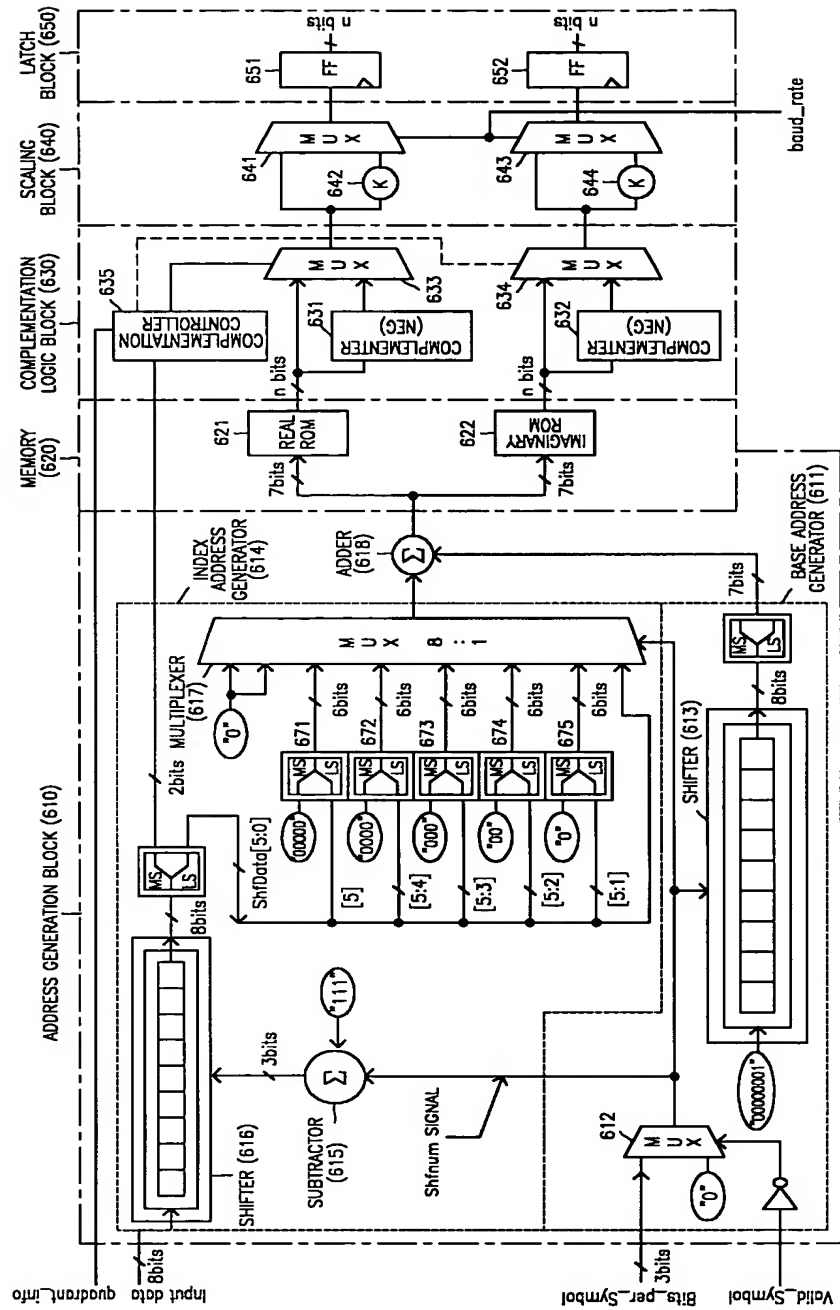


FIG. 7

Bits-per-Symbol	VALID INPUT DATA BITS 7th -> 0th bit (X: not valid)
"000"	"XXXXXXXX"
"001"	"XXXXXX00"
"010"	"XXXXX000"
"011"	"XXXX0000"
"100"	"XXX00000"
"101"	"XX000000"
"110"	"X0000000"
"111"	"00000000"

FIG. 8

address	ROM Data
0	zero symbol
1	qpsk r(0)
2	8-psk r(0)
3	8-psk r(1)
4	16-qam r(0)
5	16-qam r(1)
6	16-qam r(2)
7	16-qam r(3)
⋮	
65	256-qam r(0)
66	256-qam r(1)
67	256-qam r(2)
⋮	
127	256-qam r(63)

address	ROM Data
0	zero symbol
1	qpsk I(0)
2	8-psk I(0)
3	8-psk I(1)
4	16-qam I(0)
5	16-qam I(1)
6	16-qam I(2)
7	16-qam I(3)
⋮	
65	256-qam I(0)
66	256-qam I(1)
67	256-qam I(2)
⋮	
127	256-qam I(63)

FIG. 9

Bits-per-Symbol	VALID INPUT DATA BITS 7th -> 0th bit (X: not valid)	Shfnum	INPUT DATA SHIFTED BY AS MUCH AS 7-Shfnum (X: not valid)
"000"	"XXXXXXXX"	0	"00000000"
"001"	"XXXXXXQQ"	1	"QQ000000"
"010"	"XXXXXQQB"	2	"QQB00000"
"011"	"XXXXQQBB"	3	"QQBB0000"
"100"	"XXXQBBBB"	4	"QQBBBB000"
"101"	"XXQBBBBB"	5	"QQBBBBB00"
"110"	"XQBBBBBB"	6	"QQBBBBBB0"
"111"	"QQBBBBBB"	7	"QQBBBBBBB"

FIG. 10A

$S1=qi1, S0=qr0$

QUARDANT	qi1	qr0	S1	S0
I	0	0	+	+
II	0	1	-	+
III	1	1	-	-
IV	1	0	+	-

FIG. 10B

$S1=qi1, S0=qr0'$

QUARDANT	qi1	qr0	S1	S0
I	0	0	+	-
II	0	1	+	+
III	1	1	-	+
IV	1	0	-	-

FIG. 10C

$$S1=qi1', S0=qr0'$$

QUARDANT	qi1	qr0	S1	S0
I	0	0	-	-
II	0	1	-	+
III	1	1	+	+
IV	1	0	+	-

FIG. 10D

$$S1=qi1', S0=qr0$$

QUARDANT	qi1	qr0	S1	S0
I	0	0	-	+
II	0	1	-	-
III	1	1	+	-
IV	1	0	+	+

FIG. 11

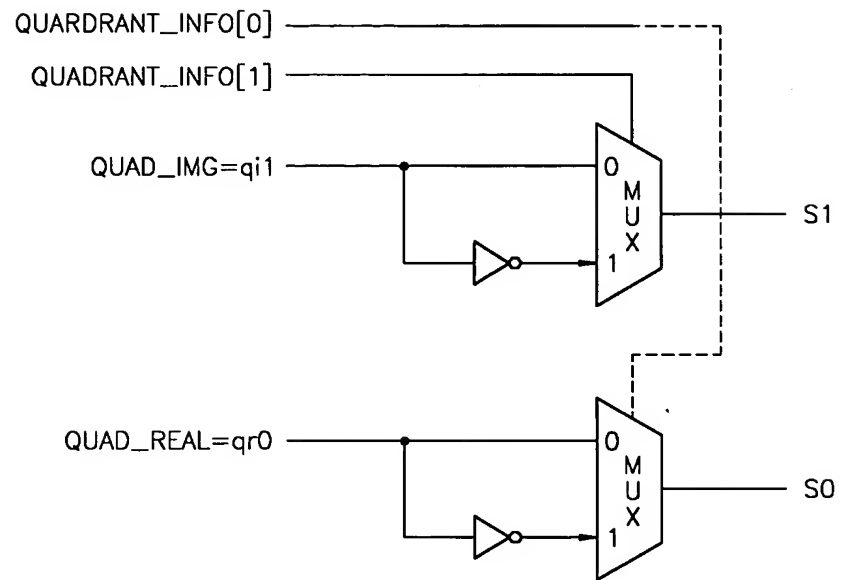


FIG. 12

